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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/520,158

01/04/2005

Holger Klapproth

STURK0017

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EXAMINER

AUDET, MAURY A

ART UNIT

PAPER NUMBER

1654

MAIL DATE

DELIVERY MODE

10/10/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/520,158	KLAPPROTH, HOLGER	
	Examiner	Art Unit	
	Maury Audet	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 16-22, 24, 27, 28, 30-36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16, 18-20, 22, 24, 27, 28, 30-36 and 38 is/are rejected.
- 7) ☒ Claim(s) 17 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

The present application has been transferred from former Examiner Bradley to the present Examiner. Applicant's filing of an RCE is acknowledged. The rejections have been substantially maintained. However, the present Office Action is being sent NON-FINAL, rather than FINAL, to allow Applicant ample time to address the subject matter of the invention in view hereof.

***Response to Applicant's Arguments***

There were no substantive amendments to the claims, versus those under examination at the time of the FINAL rejection. Applicant's 11 pages of arguments have been considered, but are not found persuasive over the broad claims, based on the previous Examiner's reasons of record. However, Applicant's arguments are deemed persuasive over the preferred embodiments of claims 17 and 21. See Claim Objections below.

The rejections have been repeated below for continuity of record:

***Claim Rejections - 35 USC § 103***

As to the rejection of claims 16, 19-20, 22, 24, 27, 28, 30-36 and 38 under 35 U.S.C. 103(a) for being obvious over Nguyen *et al.* and Browne *et al.*, the rejection is maintained. As to claims 17 and 21 these are collectively objected to (see below). As noted before, Applicant's arguments filed 1/23/2007 have been fully considered but they are not persuasive. Applicant's argument that U.S. Patent No. 5,264,831, which was not relied upon in the pending rejection, teaches away from the combination is irrelevant. The Nguyen reference (*J. Biotech.*, 1999, 72,

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115-25) cited as the primary reference in the pending rejection does not teach away from the use of trehalose and LEA proteins to stabilize immobilized biomolecules. The fact that another reference by two of the same authors suggests that agents used to stabilize antibodies are not effective to stabilize enzymes is unpersuasive in part because the claims are not drawn to enzymes. Furthermore, the secondary reference (Browne *et al.*, *Nature*, **2002**, 416, 38) teaches that in fact the combination of trehalose and LEA proteins stabilize a wide range of biomolecules in plants subjected to drought conditions. Applicants argue that Browne *et al.* fail to teach the use of trehalose and LEA proteins to stabilize immobilized biomolecules. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). If the Browne reference taught the use of trehalose and LEA to stabilize immobilized biomolecules, the rejection would have been made under 35 U.S.C. 102. Browne *et al.* teach that LEA proteins, together with trehalose and related sugars, stabilize biomolecules in plants during desiccation. Nguyen *et al.* teach the use of trehalose to stabilize immobilized biomolecules. It would have been obvious to add the LEA proteins to the composition taught by Nguyen *et al.* given that it was known in another context that these molecules both contribute to the stability of biomolecules. Finally, Applicant argues that the Browne *et al.* reference is speculative and does not teach the combination of non-reducing sugars and LEA proteins. This is unpersuasive given that Browne *et al.* cite a reference by Wolker *et al.* (cited on International Search Report) which demonstrates that sucrose glasses are stabilized *in vitro* by interaction with a purified group-3 LEA protein. Regarding the newly

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added claim 38, Nguyen *et al.* teaches the additional limitation of incubating surface with a sample to obtain an analytical or diagnostic result (see abstract) and is likewise rejected.

### ***Claim Objections***

Claims 17 and 21 are objected to because of the following informalities:

The claims depend from rejected base claims. However, based on the arguments, the references of record are not presently deemed to provide sufficient teachings/suggestions for one of ordinary skill in the art to be motivated to select the specific combinations of the SEQ ID NOS: 2-9 of the claim 21 and the specific non-reducing disaccharides of claim 17. Were the limitations of BOTH of these claims distinctly amended into the base claim, the claims would like receive favorable consideration.

Appropriate correction is required.

### ***Conclusion***

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

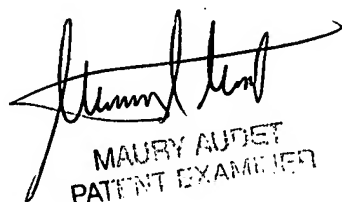
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maury Audet whose telephone number is 571-272-0960. The examiner can normally be reached on M-Th. 7AM-5:30PM (10 Hrs.).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAA, 9/29/07



MAURY AUDET  
PATENT EXAMINER